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ORIGINAL ARTICLE

All in the family: Times are changing

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Abstract

Background: General practitioners are familiar with the fact that individual use of care is determined by the family. This paper describes to what extent patterns found in the 1970s can still be replicated in the early 21st century, analyzing the impact of the family on frequency of presenting minor illnesses in general practice. **Methods:** We used the data of the families in the CMR database during two five-year periods: 1971–1975 and 2001–2005. All episodes of minor illness were registered using the same classification criteria in both studies. The population under study was divided in low and medium/high social class. Pearson correlation coefficients and a hierarchical linear model were used to analyse the impact of family on the frequency of presenting minor illnesses. **Results:** Correlations between parents (M/F) were stronger in 1971–1975 than in the 2001–2005 period. The influence of the family on presenting minor illness in general practice has decreased from 27.7 to 20.3%.

Conclusion: Though the influence of the family on presenting minor illness in general practice has decreased, nowadays (2001–2005) still we found strong correlations between family members in presenting morbidity to the GP.

Key words: *Family medicine, minor illnesses, disease patterns, family patterns in morbidity*

Introduction

General practitioners are familiar with the fact that individual use of care is determined by the family (1). Families share the same social and cultural history, lifestyle, home environment, beliefs and coping related to illness and health and this shapes help seeking behavior. In addition to this, parents and children share the same genetic backgrounds. This results in common vulnerability to health threats, and a common frame of reference to the individual experience of illness, the way feelings are discussed in the family, and the threshold to contact their GP (2).

An analysis of a national morbidity survey with more than 40,000 families showed that 22% of the variance in frequency of contacts with a GP could be explained by family factors (3). The correlation in frequency of *first* contacts with general practice were strongest between mothers and children and between children of the same generation. In an in-

depth study socialization was a more important factor than shared circumstances or selection (4).

In a previous study on minor illness using the CMR database we found high correlations in presented morbidity between family members (5). But times are changing, and there have been major changes in family size and society's valuing of the role of the family in the past 35 years. Therefore the aim of this study was to analyze changes in the impact of the family on frequency of presenting minor illnesses in general practice.

Methods

We used the data of all the families in the CMR database during two five-year periods: 1971–1975 and 2001–2005. Only family members who were listed with the practice and consequently could be followed for the full 5 years of the respective period were included. Included in the analysis were families that consisted of (i) a father and a mother; and (ii)

one or more children, younger than 18 years of age at the start of the period. All episodes of minor illness were registered using the same classification criteria in both studies. As definition of minor illness we used the following criterion: an episode of non serious illnesses, not influencing the validity. A panel of experienced GP's judged all the diagnoses out of the classification list at this aspect. As dependent variable we used the total number of presented morbidity (minor illnesses). The population under study was divided in low and medium/high social class as defined (see article Chris van Weel, 5–12). Pearson correlation coefficients were calculated to analyze correlations in the number of episodes of minor illness presented, between family members. We calculated the correlation between the fathers and mothers ($n=1353$ in period 1971–1975; $n=1018$ in period 2001–2005), parents and oldest son ($n=1052$ in period 1971–1975, $n=701$ in period 2001–2005), parents and oldest daughter ($n=976$ in period 1971–1975; $n=668$ in period 2001–2005). The relation between children was only studied for the oldest son and daughter. In period 1971–1975 there were 675 families with at least one son and daughter, and in period 2001–2005 there were 350 families fulfilling this criteria. The restriction to choose for the oldest son/daughter was made to avoid statistical complications (dependency).

A hierarchical linear model was used to estimate the variability in the number of episodes presented, associated with the three levels – patient, family and practice.

Results

As mentioned, we identified 1353 families in the period 1971–1975 and 1018 families in 2001–2005 that matched the inclusion criteria. In 1971–1975 the number of children per family was much higher than in the 2001–2005 period: almost 40% of the families having three or more children versus 12.5%. In 1971–1975 the largest family counted 11 children, compared to four in 2001–2005.

In Table 1 Pearson correlations are presented in both time frames. Correlation between M/F was much stronger in 1971–1975 than in the 2001–2005

Table 2. Three level hierarchical linear model: Percentage of the variance of presented episodes of minor illness in general practice associated with the practice, family and individual level in two time periods.

	1971–75	2001–05
Practice	4.4	0.1
Family	27.7	20.3
Individual	67.9	79.6

period. All other correlations also were less strong in 2001–2005 compared to the 1971–1975 period. The only exception were the correlations between daughters and sons, which remained unchanged.

Table 2 shows that the influence of the family on presenting minor illness in general practice had decreased from 27.7 to 20.3%.

In Table 3 the correlations between parents, and between siblings are shown for different social classes. In the period 1971–1975 these correlations were stronger in high social class. In 2001–2005 these differences between social class had disappeared.

Discussion

Nowadays (2001–2005) still we find strong correlations between family members in presenting morbidity to the GP. But the strength of influence of 'the family' on whether or not to contact the GP has declined over the last 30 years.

The findings are compatible with the model in which review by and discussions between family members are significant factors in determining general practice consultations. It is not only their own worries, that bring patients to this decision: quite often, they decide to consult their GP because their family members are much more worried than the patient him- or herself.

Family factors will determine in particular variation in consulting for non-serious, everyday health problems. And as expected this concerns especially children of the younger age category, where it are the parents who usually decide when to visit the GP.

In the years 1971–1975 there were differences between the social classes, with correlations much

Table 1. Pearson correlations between family members in presenting minor illness during the periods 1971–1975 and 2001–2005.

	Mother	Father	Daughter	Son
1971–1975	Mother	0.30 (CI 0.25–0.35)	0.41 (CI 0.36–0.46)	0.34 (CI 0.28–0.39)
2001–2005		0.18 (CI 0.18–0.24)	0.29 (CI 0.22–0.36)	0.24 (CI 0.17, 0.31)
1971–1975	Father		0.29 (CI 0.23–0.34)	0.25 (CI 0.19, 0.31)
2001–2005			0.21 (CI 0.14–0.28)	0.20 (CI 0.13, 0.27)
1971–1975	Daughter			0.43 (CI 0.37–0.49)
2001–2005				0.44 (CI 0.36, 0.52)

Table 3. Pearson correlations between family members (mothers/fathers, M/F and sons/daughters, S/D) in presenting minor illness during the periods 1971–1975 and 2001–2005 according to social background.

	1971–75	2001–05
Low SES		
M/F	0.27 (CI 0.20–0.33)	0.18 (CI 0.08–0.28)
S/D	0.36 (CI 0.27–0.45)	0.49 (CI 0.34–0.62)
Medium/high SES		
M/F	0.35 (CI 0.27–0.41)	0.16 (CI 0.09–0.24)
S/D	0.48 (CI 0.39–0.56)	0.41 (CI 0.29–0.51)

lower in the lowest social class. These differences were not found in the data in the years 2001–2005. There are in our view no obvious reasons to explain this.

The findings should be placed against the background of a secular trend in which consultation rates of children and younger adults did decrease, while that of elderly patients has increased (6).

Despite the changes over time, GPs should continue to consider patients within the context of their families, and seek to clarify the reasons for consulting in the family background. Health promotion and risk reduction will benefit as well from such approach, as it would highlight genetic and environmental determinants of health, *perception* of health problems and health *behavior*. Health education will be even more important, as small families with fewer children means that parents have less ‘natural’ learning experience in coping with health needs of their own children (7).

Not only the times are changing for the size, the structure and the interactions of families. General practice is changing as well. In The Netherlands there is a strong decline in single handed practices. More GP’s work in teams and work part-time, and this may restrict their exposure to consultations of

the various members of the same family. These factors contribute to a lower, but still relevant, impact of family factors on medical care..

Information technology and electronic medical records have the potential to make-up for this – at least in part: by linking individuals’ electronic records to those of their family members. The result of this study again underline the value of this. Patients expect continuity of care of their GP (8). Continuity of care for the whole family will continue to lend additional value.

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